

WHAT IS CLAIMED IS:

1. A medical image handling system comprising:
  - a) a monitor for displaying a medical image;
  - b) an input device for inputting an image reading  
5 report corresponding to the medical image displayed  
on said monitor; and
  - c) a processor capable of a control of judging  
presence or absence of an image reading report  
corresponding to the medical image displayed on said  
10 monitor and restricting a change of said medical  
image, in case the image reading report is judged  
absent by judging means.
2. A medical image handling system according to  
15 claim 1, wherein said processor judges presence or  
absence of an image reading report corresponding to  
the medical image displayed on said monitor when the  
medical image displayed on said monitor is changed.
- 20 3. A medical image handling system comprising:
  - a) a monitor for displaying a medical image;
  - b) an input device for inputting an image reading  
report corresponding to the medical image displayed  
on said monitor; and
  - 25 c) a processor capable of a control of judging  
presence or absence of an image reading report  
corresponding to the displayed medical image and

requesting an input of an image reading report, in case the image reading report is judged absent by judging means.

5           4. A medical image handling system according to  
claim 3, wherein said processor judges presence or  
absence of an image reading report corresponding to  
the medical image displayed on said monitor when the  
medical image displayed on said monitor is changed.

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5. A medical image handling system according to claim 3, wherein said processor measures a time elapsing from the display of the medical image on said monitor and judges presence or absence of an image reading report corresponding to the displayed medical image when the measured time exceeds a predetermined time.

6. A medical image handling system comprising:

20 a) a monitor for displaying a medical image;

b) an input device for inputting an image reading report corresponding to the medical image displayed on said monitor; and

c) a processor capable of a control of judging  
25 presence or absence of an image reading report  
corresponding to the displayed medical image and  
automatically inputting a predetermined image reading

report, in case the image reading report is judged absent by judging means.

7. A medical image handling system according to  
5 claim 6, wherein said processor judges presence or absence of an image reading report corresponding to the medical image displayed on said monitor when the medical image displayed on said monitor is changed.

10 8. A medical image handling system according to claim 6, wherein said processor measures a time elapsing from the display of the medical image on said monitor and judges presence or absence of an image reading report corresponding to the displayed  
15 medical image when the measured time exceeds a predetermined time.

9. A medical image handling method comprising:  
a) a step of displaying a medical image;  
20 b) a step of judging presence or absence of an image reading report corresponding to the displayed medical image; and  
c) a step of restricting a change of the displayed medical image, in case the image reading report is  
25 judged absent by said judging step.

10. A medical image handling method according

to claim 9, wherein said step of judging presence or absence of an image reading report is executed in the case that the displayed medical image is changed.

5           11. A medical image handling method according to claim 9, wherein, in said judging step, a time elapsing from the display of the medical image in said displaying step is measured, and a step of judging presence or absence of an image reading  
10 report the measured time exceeds a predetermined time.

          12. A medical image handling method comprising:  
          a) a step of displaying a medical image;  
          b) a step of judging presence or absence of an  
15 image reading report corresponding to the displayed medical image; and  
          c) a step of requesting an input of an image reading report corresponding to the displayed medical image, in case the image reading report is judged  
20 absent.

          13. A medical image handling method according to claim 12, wherein said step of judging presence or absence of an image reading report is executed in the  
25 case that the displayed medical image is changed.

          14. A medical image handling method according

to claim 12, wherein, in said judging step, a time  
elapsing from the display of the medical image in  
said displaying step is measured, and a step of  
judging presence or absence of an image reading  
5 report the measured time exceeds a predetermined time.

15. A medical image handling method comprising:  
a) a step of displaying a medical image;  
b) a step of judging presence or absence of an  
10 image reading report corresponding to the displayed  
medical image; and  
c) a step of automatically inputting a  
predetermined image reading report, in case the image  
reading report is judged absent.

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16. A medical image handling method according  
to claim 15, wherein said step of judging presence or  
absence of an image reading report is executed when  
the displayed medical image is changed.

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17. A medical image handling method according  
to claim 15, wherein, in said judging step, a time  
elapsing from the display of the medical image in  
said displaying step is measured, and a step of  
25 judging presence or absence of an image reading report  
the measured time exceeds a predetermined time.

18. A medical image handling method according to claim 15, wherein the image reading report automatically inputted by said control step includes either of a name of an image reading person or an  
5 image display time.

19. A medical image handling method comprising:  
a) a step of displaying a medical image;  
b) a step of instructing a change in the displayed  
10 medical image;  
c) a step of judging, in case said change instructing step is an instruction for changing a subject person, whether another medical image other than the displayed medical image exists for the same  
15 subject person of the displayed medical image; and  
d) a step of restricting a change in the subject person instructed by said change instructing step, in case another medical image other than the displayed medical image is judged to exist for the same subject  
20 person of the displayed medical image.

20. A medical image handling system for reading medical image data stored in a memory medium and executing a display on a monitor, comprising:  
25 a) divided display format setting means for setting a divided display format for determining an image display area on the monitor;

b) display mode setting means which sets either a mode for displaying a taken image or a diagnosis supporting image, in the image display area determined according to the divided display format set by said divided display format setting means;

c) image reading means which reads the medical image data stored in the memory medium, based on the divided display format set by said divided display format setting means and the mode set by said display mode setting means;

d) image processing means which applies an image processing for display on the medical image data read by said image reading means; and

e) image display means which displays an image based on the medical image data subjected to the image processing by said image processing means, in the image display area determined according to the divided display format set by said display format setting means.

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21. A medical image handling system according to claim 20, further comprising:

image switching means which switches the image displayed by said image display means;

wherein said image reading means reads the medical image data according to a switching process by said image switching means.

22. A medical image handling system according to claim 20, wherein said divided display format setting means sets plural image display areas, formed by dividing the display area of said monitor, as said  
5 divided display format; and said display mode setting means sets either of a mode of displaying a taken image or a mode of displaying a diagnosis supporting image in each of the plural image display areas set by said divided display format setting means.

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23. A medical image handling system according to claim 22, wherein, in case said display format setting means sets a division of said image display area into two or more areas, said display mode  
15 setting means sets a mode of displaying said taken image in at least an image display area and a mode of displaying said diagnosis supporting image in at least an image display area, said image switching means is adapted, in switching said taken image  
20 displayed in the image display area for displaying the taken image, to switch in linkage the diagnosis supporting image displayed in the image display area for displaying the diagnosis supporting image to a diagnosis supporting image related in time to a taken  
25 image after the switching.

24. A medical image handling system according



to claim 23, further comprising a link inhibition  
flag for inhibiting a switching in each of the image  
display areas executing display by said divided  
format setting means wherein, in case said link  
5 inhibition flag is turned on, when said taken image  
is switched by said image switching means, a linked  
switching of said diagnosis supporting image is  
inhibited.

10           25. A medical image handling system according  
to claim 20, further comprising pre-fetch means for  
pre-fetching medical image data stored in said memory  
medium.

15           26. A medical image handling system according  
to claim 25, wherein said pre-fetch means determines  
an order of pre-fetching the medical image data  
stored in said memory medium, based on the divided  
display format set by said divided display format  
20 setting means and the mode set by said display mode  
setting means, and pre-fetches said medical image  
data according to said determined order.

25           27. A medical image handling system according  
to claim 20, wherein said diagnosis supporting image  
is an image obtained by a differential treatment of  
plural taken images taken at timings different in

time.

28. A medical image handling system according to claim 23, wherein, in case said display format  
5 setting means sets a division of said image display area into two or more, said display mode setting means sets a change from a mode for displaying said taken image to a mode for displaying said diagnosis supporting image and said image switching means  
10 switches said diagnosis supporting image in linkage with said taken image, said image display means displays a latest diagnosis supporting image relating to a taken image constituting an object of said diagnosis supporting image.

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29. A medical image handling system for displaying at least either of a taken image and a diagnosis supporting image, stored in a memory medium, on an image frame of a monitor, comprising:

20 a) display area setting means for setting an image display area in the image frame of said monitor;

b) display image setting means for setting a display of the taken image or the diagnosis supporting image in the image display area set by  
25 said display area setting means; and

c) image display means for reading the taken image or the diagnosis supporting image, set by said

display image setting means, from said memory medium and displaying in the image display area set by said display area setting means.

5           30. A medical image handling system according to claim 29, further comprising image switching means for switching the taken image or the diagnosis supporting image displayed by said image display means to another image, wherein said image display  
10 means, according to a switching process by said image switching means, reads and displays the taken image or the diagnosis supporting image from said memory medium.

15           31. A medical image handling system according to claim 29, wherein, in case plural image display areas are set by said display area setting means, said display image setting means sets a display of said taken image in at least one of said plural image  
20 display areas and a display of a diagnosis supporting image related in time to said displayed taken image in at least one of the remaining image display areas.

25           32. A medical image handling method for reading medical image data stored in a memory medium and executing a display on a monitor, comprising:  
a) a divided display format setting step of

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setting a divided display format for determining an image display area on said monitor;

b) a display mode setting step of setting a mode for displaying a taken image or a mode for displaying a diagnosis supporting image in the image display area determined according to the divided display format set by said divided display formatting setting step;

c) an image reading step of reading the medical image data stored in said memory medium, based on the divided display format set by said divided display format setting step and the mode set by said display mode setting step;

d) an image processing step of applying an image processing for display to the medical image data read by said image reading step; and

e) an image display step of displaying an image based on the medical image data subjected to the image processing in said image processing step, in the image display area determined according to the divided display format set by said divided display format setting step.

33. A medical image handling method according to claim 32, further comprising an image switching step of switching the image display by said image display step, wherein said image reading step reads the

medical image data according to a switching process by said image switching step.

34. A medical image handling method according to  
5 claim 32, wherein said divided display format sets plural image display areas formed by dividing the display area of said monitor as said divided display format, and wherein said display mode setting step  
10 sets either a mode for displaying a taken image or a mode for displaying a diagnosis supporting image for each of the plural image display areas set by said divided display format setting step.

35. A medical image handling method according to  
15 claim 34, wherein, in case said display format setting step sets a division of said image display area into two or more, and said display mode setting step sets a mode for displaying said taken image in at least an image display area and sets a mode for  
20 displaying said diagnosis supporting image in at least an image display area, said image switching step is adapted, in case of switching said taken image in the image display area for displaying the taken image, to switch in linkage said diagnosis  
25 supporting image displayed in the image display area for displaying the diagnosis supporting image to a diagnosis supporting image related in time with a

taken image after the switching.

36. A medical image handling method according to claim 35, wherein, in case a link inhibition flag,  
5 for inhibiting a switching of each image display area displayed by said divided format setting step, is turned on, a switching in linkage of said diagnosis supporting image is inhibited when said image switching step switches said taken image.

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37. A medical image handling method according to claim 32, further comprising a pre-fetch step for pre-fetching medical image data stored in said memory medium.

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38. A medical image handling method according to claim 37, wherein, said pre-fetch step determines an order of pre-fetching the medical image data stored in said memory medium, based on the divided  
20 display format set by said divided display format setting step and the mode set by said display mode setting step, and pre-fetches said medical image data according to said determined order.

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39. A medical image handling method according to claim 35, wherein, said diagnosis supporting image is an image obtained by a differential treatment of

plural taken images taken at timings different in time.

40. A medical image handling method according  
5 to claim 35, wherein, in case said display format  
setting step sets a division of said image display  
area into two or more, said display mode setting step  
sets a change from a mode for displaying said taken  
10 image to a mode for displaying said diagnosis  
supporting image and said image switching step  
switches said diagnosis supporting image in linkage  
with said taken image, said image display step  
displays a latest diagnosis supporting image relating  
to a taken image constituting an object of said  
15 diagnosis supporting image.

41. A medical image handling method for  
displaying at least either of a taken image and a  
diagnosis supporting image, stored in a memory medium,  
20 on an image frame of a monitor, comprising:

- a) a display area setting step of setting an image  
display area in the image frame of said monitor;
- b) a display image setting step of setting a  
display of the taken image or the diagnosis  
25 supporting image in the image display area set by  
said display area setting step; and
- c) an image display step of reading the taken

image or the diagnosis supporting image, set by said display image setting step, from said memory medium and displaying in the image display area set by said display area setting step.

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42. A medical image handling method according to claim 41, further comprising an image switching step of switching the taken image or the diagnosis supporting image displayed by said image display step to another image, wherein said image display step, according to a switching process by said image switching step, reads and displays the taken image or the diagnosis supporting image from said memory medium.

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43. A medical image handling method according to claim 41, wherein, in case plural image display areas are set by said display area setting step, said display image setting step sets a display of said taken image in at least one of said plural image display areas and a display of a diagnosis supporting image related in time to said displayed taken image in at least one of the remaining image display areas.

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44. A medical image handling system comprising:  
a) a monitor in which plural image display areas are set and which displays a taken image in any of



the plural image display areas and a diagnosis supporting image prepared utilizing said taken image in any of remaining image display areas;

b) an input device for inputting an instruction  
5 for changing a taken image displayed in any of said plural image display areas; and

c) a processor for executing a control, in case a taken image displayed in any of said plural image display areas is changed, of displaying, in any of  
10 remaining image display areas, a diagnosis supporting image prepared utilizing the taken image after the change.

45. A medical image handling system according  
15 to claim 44, wherein, said diagnosis supporting image is a differential image prepared utilizing a taken image displayed in any of said plural image display area.

20 46. A medical image handling system according to claim 45, wherein said diagnosis supporting image is a time-differential image obtained from a taken image displayed in any of said plural image display areas and a taken image taken before said taken image.

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47. A medical image handling system according to claim 46, wherein said diagnosis supporting image

is a time-differential image obtained from a taken image displayed in any of said plural image display areas and a taken image taken before said taken image, with a shortest interval in time.

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48. A medical image handling method for displaying a taken image and a diagnosis supporting image on a monitor, comprising:

- a) a display area setting step of setting plural  
10 image display areas in said monitor;
- b) an image display step of displaying a taken image in any of the plural image display areas set by said display area setting step and a diagnosis supporting image prepared utilizing said taken image  
15 in any of remaining image display areas; and
- c) a display changing step, in case a taken image displayed in any of said plural image display areas is changed, of displaying, in any of remaining image display areas, a diagnosis supporting image prepared  
20 utilizing the taken image after the change.

49. A medical image handling method according to claim 48, wherein said diagnosis supporting image is a differential image prepared utilizing a taken  
25 image displayed in any of said plural image display area.

50. A medical image handling method according  
to claim 49, wherein said diagnosis supporting image  
is a time-differential image obtained from a taken  
image displayed in any of said plural image display  
5 areas and a taken image taken before said taken image.

51. A medical image handling method according  
to claim 50, wherein said diagnosis supporting image  
is a time-differential image obtained from a taken  
10 image displayed in any of said plural image display  
areas and a taken image taken before said taken image,  
with a shortest interval in time.